

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 9

In The Matter Of:

Louisiana-Pacific Corporation,
Respondent.

U.S. EPA
Docket No. 91-18

Proceeding Under Section 106(a) of
the Comprehensive Environmental
Response, Compensation, and
Liability Act of 1980, as amended
(42 U.S.C. § 9606(a))

ADMINISTRATIVE ORDER
FOR
REMEDIAL DESIGN AND REMEDIAL ACTION

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ADMINISTRATIVE ORDER
FOR REMEDIAL DESIGN AND REMEDIAL ACTION

I. INTRODUCTION AND JURISDICTION

This Order directs Respondent Louisiana-Pacific Corporation ("L-P") to perform a remedial design for the remedy described in the Record of Decision for the Louisiana-Pacific Superfund Site in Oroville, California, issued September 28, 1990, and to implement that design through remedial action. The United States Environmental Protection Agency ("EPA") issues this Order to Respondent under the authority vested in the President of the United States by Sections 104(a) and 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. Sections 9604(e) and 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), redelegated to EPA Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-B, and was further delegated to the Director, Hazardous Waste Management Division, EPA Region 9 by Order R1290.43, dated October 26, 1988.

II. FINDINGS OF FACT

1. The Louisiana-Pacific Site, as defined in Section VI(15) below, is located near the southern limit of the City of Oroville in Butte County. It is divided into a plant, consisting of operating wood processing and hardboard manufacturing facilities;

1 and a landfill, located about 1/2 mile east of the plant, that is
2 used for the disposal of wood wastes and boiler ash generated at
3 the plant. The Koppers Company, Inc., Superfund Site is located
4 between the L-P plant, which is west of the Koppers site, and the
5 L-P landfill, which is east of the Koppers site.

6 2. Louisiana-Pacific Corporation is the current owner and
7 operator of the plant and the landfill, including the wood
8 products and waste disposal facilities located thereon. The
9 previous property owner and facility operator was Georgia-Pacific
10 Corporation. Georgia-Pacific purchased the present Louisiana-
11 Pacific site in 1969, completed construction of the sawmill in
12 1970, and operated it until 1973, when Louisiana-Pacific
13 Corporation assumed plant ownership and operation. Louisiana-
14 Pacific began operating the landfill in 1978. The hardboard
15 plant was placed into operation by L-P in 1978.

16 3. The western boundary of the Louisiana-Pacific Site is
17 approximately one-half mile east of the Feather River. The Site
18 lies in or adjacent to the Feather River flood plain, which is
19 approximately 2.7 miles wide near the Site. The plant lies
20 roughly 145 feet above sea level; the Feather River is roughly
21 130 feet above sea level. The L-P plant is bounded on the
22 eastern side by the Koppers Company, Inc. Superfund site. South
23 and east of the plant, the floodplain ends at a prominent bluff
24 marked by knolls and intervening ravines. The bluff ranges from
25 100 to 170 feet higher than the floodplain. The landfill
26 occupies the eroded bluff, a ravine and the upland area of the

1 bluff just beyond the eastern edge of the Feather River
2 floodplain.

3 4. Surface water run-off from the Louisiana-Pacific plant
4 flows mainly southerly into the Log Deck Pond, with a number of
5 minor drainage areas controlled by the irregular topography at
6 the plant. Drainage from the landfill flows largely westward
7 onto the Koppers Superfund site.

8 5. The underlying geology of the Site consists of gravels,
9 sands and clays that were deposited by the Feather River and an-
10 cestral Feather River systems. The plant and environs rest on
11 tailings piles created by dredger mining activities which ceased
12 about 1936. Several interconnected aquifer zones have been
13 defined on and off the Site. Two aquifers and an intervening
14 clay aquitard have been identified beneath the L-P plant: the
15 shallow aquifer, the shallow aquitard, and the regional aquifer.
16 Water movement in the shallow aquifer is to the north and west,
17 away from recharge areas created by the ponds and boundary ditch
18 and by infiltration of sprinkler irrigation on the log deck. The
19 regional groundwater flow is generally to the south, with upper
20 aquifers demonstrating some southwesterly components. However,
21 operation of L-P's water supply wells creates a cone of
22 depression beneath the L-P Site that causes groundwater in the
23 regional aquifer to move laterally toward the Site from all
24 directions.

25 6. Land use in the vicinity of the Site is mixed agricul-
26 tural, residential, commercial and industrial. Produce and live-

1 stock raised on local one to five-acre farms are primarily
2 consumed by residents and not sold commercially. Residential
3 areas are located to the south, southeast, west and northeast of
4 the Site. Three schools are located within a two-mile radius of
5 the Site.

6 7. The L-P plant facilities include a sawmill, a hardboard
7 plant, a 48-acre log deck (i.e., a log storage area), and a log
8 deck pond that holds water and receives runoff from the log
9 spraying system. The sawmill processes the logs into finished
10 lumber. A fungicide spray treatment area was used to treat cut
11 lumber at the sawmill until 1988 when it was phased out. A
12 drying kiln and planing mill handle a portion of the cut lumber.
13 At the hardboard plant, L-P manufactures hardboard from wood
14 shavings and wood chips stored at the plant, using a urea-
15 formaldehyde resin. Wood particle storage areas at the plant
16 contain sawdust, shavings and chips, and bark.

17 8. L-P has used a variety of wood treating chemicals in its
18 fungicide spray system, including pentachlorophenol solutions, to
19 prevent fungal discoloration in finished lumber. Chemical
20 formulations used at L-P include sodium pentachlorophenate,
21 phenol-mercuric lactate, Koppers Noxtane (14% pentachlorophenol),
22 Permatox (6% pentachlorophenol), Chapman PQ-8, and Koppers
23 Quinolate. Wastewaters from hardboard manufacturing processes
24 and from the boilers were discharged directly to the western
25 sump, an unlined pond near the western boundary of the plant.
26 Prior to 1987, water was conveyed from the western sump to the

1 log deck pond via an aboveground pipeline.

2 9. In 1973, the California Regional Water Quality Control
3 Board for the Central Valley Region ("RWQCB") found
4 pentachlorophenol ("PCP") surface water contamination at several
5 locations on the L-P site. In 1979, PCP contamination was found
6 in waste sawdust from the L-P plant.

7 10. In February 1986, a general notice letter was issued to
8 L-P informing them that L-P was potentially liable for costs
9 associated with conducting the Remedial Investigation and
10 Feasibility Study ("RI/FS") for the Site.

11 11. EPA and L-P unsuccessfully attempted to negotiate for
12 L-P to perform the RI/FS. After negotiations broke down, L-P
13 independently conducted a study that was never authorized nor
14 approved by EPA. The independent L-P investigation was not
15 conducted under the authority of CERCLA, the National Contingency
16 Plan ("NCP"), or EPA guidance, and did not have EPA oversight and
17 review.

18 12. An RI/FS was conducted by EPA pursuant to 40 C.F.R.
19 § 300.68 in response to a release or substantial threat of a
20 release of a hazardous substance at or from the Site.

21 13. A Remedial Investigation ("RI") Report was completed by
22 EPA in January 1989, and a Feasibility Study ("FS") Report was
23 completed by EPA in May 1990. Pursuant to Section 117 of CERCLA,
24 42 U.S.C. § 9617, EPA published notice of the completion of the
25 FS Report. In May and June 1990, opportunity was provided for
26 public comment on the proposed remedial action when the FS Report

1 was released to the public.

2 14. The RI/FS characterized releases of hazardous
3 substances, evaluated contaminant transport and identified
4 remedial actions suitable for permanently preventing or
5 minimizing releases. The RI/FS focused on the following threats
6 to human health and the environment at the L-P Site:

- 7 a) disposing of wastewater containing formaldehyde and
8 other contaminants by L-P from the hardboard
9 manufacturing plant;
- 10 b) pumping of groundwater containing PCP and other
11 contaminants by L-P from the regional aquifer into the
12 ditch along the L-P/Koppers boundary
- 13 c) using surface water containing arsenic and other
14 contaminants from the L-P log deck pond to irrigate the
15 log deck;
- 16 d) releasing of contaminants resulting from L-P's handling
17 and storage of chemicals used at the plant;
- 18 e) releasing of PCP and formaldehyde from waste materials
19 deposited by L-P at the L-P landfill; and
- 20 f) seepage and migration of contaminants from L-P's
21 fungicide spray system.

22 15. The contaminants found at the Site to date include, but
23 are not limited to, pentachlorophenol, polychlorinated
24 dibenzodioxins/dibenzofurans ("PCDDs/PCDFs"), polynuclear
25 aromatic hydrocarbons ("PAHs"), arsenic, chromium, copper, and
26 formaldehyde. These contaminants are hazardous substances as

1 defined by CERCLA § 101(14), and are toxic and/or carcinogenic to
2 animals and/or humans.

3 16. Based on the information available, EPA determined that
4 future residential use of the L-P Site poses a potential threat
5 to public health based on contaminant levels in the surface soil
6 at the L-P plant, and in the groundwater at the L-P plant and the
7 landfill. However, it is not possible at this time to make a
8 final determination as to the risks to human health and
9 environment because additional information is needed to resolve
10 uncertainty about the existence of formaldehyde in groundwater as
11 a result of conflicting data and to establish the background
12 concentrations of arsenic in soil and groundwater.

13 17. The September 28, 1990 Interim Record of Decision
14 ("ROD") is the interim remedy selected by EPA to address the need
15 to obtain the additional information and consists of groundwater
16 monitoring, sampling of soils and institutional controls. A
17 complete description of the interim remedy for this Site is
18 contained in the ROD, attached hereto as Appendix A, which is
19 supported by an administrative record that contains the documents
20 and information that serves as the basis of EPA's selection of
21 the response action.

22 23 III. CONCLUSIONS OF LAW AND DETERMINATIONS

24 1. The Site is a "facility" as defined in Section 101(9)
25 of CERCLA, 42 U.S.C. Section 9601(9).

26 2. Respondent is a "person" as defined in Section 101(21)

1 of CERCLA, 42 U.S.C. Section 9601(21).

2 3. Respondent is a "liable party" as defined in Section
3 107(a) of CERCLA, 42 U.S.C. Section 9607(a), and is subject to
4 this Order under Section 106(a) of CERCLA, 42 U.S.C. Section
5 9606(a).

6 4. The substances listed in Section II.15. of this Order
7 are found at the Site and are "hazardous substances" as defined
8 in Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14).

9 5. These hazardous substances have been released at the
10 Site and are continuing to be released from the soil into the
11 groundwater.

12 6. The past disposal and migration of previously disposed
13 hazardous substances from the Site constitute a "release" and a
14 continuing threat of a "release" as defined in section 101(22) of
15 CERCLA, 42 U.S.C. section 9601(22).

16 7. The release or threat of release of one or more hazard-
17 ous substances from the facility may present an imminent and sub-
18 stantial endangerment to the public health, welfare, and the en-
19 vironment.

20 8. The actions required by this Order are necessary to
21 protect the public health, welfare, and the environment.

22 23 IV. NOTICE TO THE STATE

24 Prior to issuing this Order, EPA notified the California
25 Department of Health Services, Toxic Substances Control Program,
26 and the California Regional Water Quality Control Board, Central

1 Valley Region, of its intent to issue this Order.

2
3 V. ORDER

4 Based on the foregoing, Respondent is hereby ordered to
5 comply with the following provisions, including but not limited
6 to all appendices to this Order, all documents incorporated by
7 reference into this Order, and all schedules and deadlines in
8 this Order, attached to this Order, or incorporated by reference
9 into this Order. Respondent is jointly and severally liable to
10 perform the work and otherwise comply with all provisions of this
11 Order.

12
13 VI. DEFINITIONS

14 1. Unless otherwise expressly provided herein, terms used
15 in this Order which are defined in CERCLA or in regulations
16 promulgated under CERCLA shall have the meaning assigned to them
17 in the statute or its implementing regulations. Whenever terms
18 listed below are used in this Order or in the documents attached
19 to this Order or incorporated by reference into this Order, the
20 following definitions shall apply:

21 2. "CERCLA" shall mean the Comprehensive Environmental
22 Response, Compensation, and Liability Act of 1980, as amended, 42
23 U.S.C. Section 9601, et seq.

24 3. "Day" shall mean a calendar day unless expressly
25 stated to be a working day. "Working day" shall mean a day other
26 than a Saturday, Sunday, or Federal holiday. In computing any

1 period of time defined in "working days" under this Order, where
2 the last day would fall on a Saturday, Sunday, or Federal
3 holiday, the period shall run until the end of the next working
4 day.

5 4. "Deliverable" shall mean any plan, report, document,
6 or any other item required of the Respondent under this Order.

7 5. "EPA" shall mean the United States Environmental
8 Protection Agency.

9 6. "Groundwater Remedy" shall mean the groundwater
10 remedial actions identified in Section 10.2 of the ROD.

11 7. "National Contingency Plan" or "NCP" shall mean the
12 National Oil and Hazardous Substances Pollution Contingency Plan
13 promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605,
14 codified at 40 C.F.R. Part 300, including any amendments thereto.

15 8. "Operation and Maintenance" or "O&M" shall mean all
16 activities required under any Operation and Maintenance Plan
17 developed by Respondent pursuant to this Order as approved by
18 EPA.

19 9. "Paragraph" shall mean a portion of this Order iden-
20 tified by an arabic numeral.

21 10. "Record of Decision" or "ROD" shall mean the EPA
22 Interim Record of Decision, Louisiana-Pacific Superfund Site,
23 Oroville, California, signed on September 28, 1990, by the
24 Regional Administrator, EPA Region 9, and all attachments
25 thereto.

26 11. "Remedial Action" or "RA" shall mean those ac-

1 activities, including Operation and Maintenance, to be undertaken
2 by Respondent to implement the final plans and specifications
3 submitted by Respondent pursuant to the Remedial Design/Remedial
4 Action Work Plan approved by EPA and required by Section X of
5 this Order, including any additional activities required under
6 Sections XI, XII, XIII, XIV and XV of this Order.

7 12. "Remedial Design" or "RD" shall mean those activities
8 to be undertaken by Respondent to develop the plans and
9 specifications for the Remedial Action pursuant to the Remedial
10 Design/Remedial Action Work Plan required by Section X of this
11 Order.

12 13. "Response Costs" shall mean all costs, including
13 direct costs, indirect costs, and accrued interest incurred by
14 the United States to perform or support response actions at the
15 Site. Response costs include, but are not limited to, the costs
16 of overseeing the Work, such as the costs of reviewing or
17 developing plans, reports and other items pursuant to this Order
18 and costs associated with verifying the Work.

19 14. "Section" shall mean a portion of this Order iden-
20 tified by a roman numeral and including one or more paragraphs.

21 15. "Site" or "Louisiana-Pacific Superfund Site" shall
22 mean the "facilities", as that term is defined at Section
23 101(a)(B) of CERCLA, 42 U.S.C. Sec. 9601(a)(B), located in Butte
24 County, California, consisting of the plant and the landfill
25 identified in Figures 1-2 and 1-3 of the ROD and all areas where
26 hazardous substances released or disposed of at or from the

1 Property have come to be located.

2 16. "Soil Remedy" shall mean the soil remedial actions
3 identified in Section 10.1 of the ROD.

4 17. "State" shall mean the California Department of
5 Health Services, Toxic Substances Control Program ("DHS"), and
6 any successor departments, and the California Regional Water
7 Quality Control Board, Central Valley Region.

8 18. "Statement of Work" or "SOW" shall mean the Statement
9 of Work for Remedial Design and Remedial Action covered by this
10 Order, as set forth in Appendix B to this Order and any
11 modifications made under this Order.

12 19. "Work" shall mean all activities Respondent is re-
13 quired to perform under this Order, including but not limited to,
14 Remedial Design, Remedial Action, and any activities required to
15 be undertaken pursuant to Sections IX through XV of this Order.

16
17 VII. NOTICE OF INTENT TO COMPLY

18 Respondent shall provide, not later than seven (7) days after
19 the effective date of this Order, written notice to the EPA
20 Remedial Project Manager ("RPM") stating Respondent's intent to
21 comply with the terms of this Order. If EPA determines that
22 Respondent does not unequivocally commit to perform the Work as
23 provided by this Order, Respondent shall be deemed to have vio-
24 lated this Order and to have failed or refused to comply with
25 this Order. Respondent's written notice shall describe, using
26 facts that exist on or prior to the effective date of this Order,

1 any "sufficient cause" defenses asserted by Respondent under
2 sections 106(b) and 107(c)(3) of CERCLA. The absence of a
3 response by EPA to the notice required by this Section shall not
4 be deemed to be acceptance of Respondent's assertions.

5 6 VIII. PARTIES BOUND

7 1. This Order shall apply to and be binding upon the
8 Respondent, its directors, officers, employees, agents, suc-
9 cessors, and assigns. No change in the ownership, corporate
10 status, or other control of Respondent shall alter any of the
11 Respondent's responsibilities under this Order.

12 2. Respondent shall provide a copy of this Order to any
13 prospective owners or successors before a controlling interest in
14 Respondent's assets, property rights, or stock are transferred to
15 the prospective owner or successor. To ensure compliance with
16 this Order, Respondent shall provide a copy of this Order to each
17 contractor, sub-contractor, laboratory, or consultant retained to
18 perform any Work under this Order, within five days after the
19 effective date of this Order or on the date such services are
20 retained, whichever date occurs later. Respondent shall also
21 provide a copy of this Order to each person representing
22 Respondent with respect to the Site or the Work and shall
23 condition all contracts and subcontracts entered into hereunder
24 upon performance of the Work in conformity with the terms of this
25 Order. With regard to the activities undertaken pursuant to this
26 Order, each contractor and subcontractor shall be deemed to be

1 related by contract to the Respondent within the meaning of
2 section 107(b)(3) of CERCLA, 42 U.S.C. Section 9607(b)(3). Not-
3 withstanding the terms of any contract, Respondent is responsible
4 for compliance with this Order and for ensuring that its
5 contractors, subcontractors and agents comply with and perform
6 any Work in accordance with this Order.

7
8 IX. NOTICE OF OBLIGATIONS TO SUCCESSORS-IN-TITLE

9 1. Within ten (10) days after the effective date of this
10 Order, Respondent shall (1) record a copy or copies of this Order
11 in the appropriate governmental office where land ownership and
12 transfer records are filed or recorded; (2) record a notice of
13 obligation to provide access and related covenants; and (3)
14 ensure that the recording of this Order is indexed to the titles
15 of each and every parcel at the Site so as to provide notice to
16 third parties of the issuance and terms of this Order with
17 respect to those properties. Respondent shall, within fifteen
18 (15) days after the effective date of this Order, send notice of
19 full compliance with this Paragraph to EPA.

20 2. Not later than sixty (60) days prior to any transfer by
21 or to Respondent of any real property interest in any property
22 included within the Site, Respondent shall submit a true and
23 correct copy of the transfer documents to EPA, and shall identify
24 the transferor or transferee by name, principal business address
25 and effective date of the transfer.

1 X. WORK TO BE PERFORMED

2 A. General Obligations

3 1. Respondent shall cooperate with EPA in providing in-
4 formation to the public regarding the Work. As requested by EPA,
5 Respondent shall participate in the preparation of information
6 for distribution to the public and in public meetings which may
7 be held or sponsored by EPA to explain activities at or relating
8 to the Site.

9 2. All aspects of the Work shall be performed by qualified
10 employees or contractors of Respondent. Within fifteen (15) days
11 after the effective date of this Order, Respondent shall select
12 the contractor(s) which Respondent proposes to use in carrying
13 out the Work under this Order and notify EPA in writing of the
14 name and qualifications of the contractor(s), including primary
15 support entities and staff. Respondent's selected contractor(s)
16 shall have expertise in: (a) design and implementation of
17 remedial actions involving groundwater monitoring; and (b) design
18 and implementation of remedial actions involving soil sampling.

19 3. EPA will review and approve/disapprove of Respondent's
20 selected contractor(s) according to the terms of Section X.2. and
21 Section XIV.1. and XIV.5. of this Order. If EPA disapproves of
22 the selection of a contractor, Respondent shall submit to EPA
23 within thirty (30) days after notice of EPA's disapproval, a list
24 of contractors, including primary support entities and staff,
25 that would be acceptable to Respondent. EPA will thereafter
26 provide written notice to Respondent of the names of the

1 contractors that are acceptable to EPA. Respondent may then
2 select any approved contractor from that list and shall notify
3 EPA of the name of the contractor selected within fifteen (15)
4 days of EPA's designation of approved contractors.

5 4. If at any time Respondent proposes to use a different
6 contractor, Respondent shall notify EPA and shall obtain approval
7 from EPA before the new contractor performs any Work under this
8 Order.

9 5. Unless otherwise directed by EPA, Respondent shall not
10 perform any Work under this Section prior to EPA's approval of
11 such Work.

12 6. The Respondent shall perform all Work in accordance with
13 the standards, specifications or schedules set forth in the SOW,
14 this Order, any deliverable referenced in paragraph X.B. herein,
15 and any guidance provided by EPA. Any noncompliance with such
16 standards, specifications, or schedules shall be considered a
17 failure to comply with this Order, and shall subject Respondent
18 to civil penalties as set forth in Section XXIV of this Order.

19 7. All hazardous substances removed from the Site in
20 connection with the Work performed under the terms of this Order
21 shall be disposed of or treated at a facility approved by EPA and
22 in accordance with Section 121(d)(3) of CERCLA, 42 U.S.C.
23 Section 9621(d)(3); with the U.S. EPA "Revised Off-Site Policy,"
24 OSWER Directive 9834.11, November 13, 1987; and with all other
25 applicable Federal, state, and local requirements.

26 8. Respondent shall, prior to any off-site shipment of

1 hazardous substances from the Site to any waste management
2 facility, provide written notification of such shipment of
3 hazardous substances to the appropriate state environmental
4 official in the receiving state and to EPA's RPM. However, the
5 notification of shipments shall not apply to any off-Site
6 shipments when the total volume of all shipments from the Site to
7 the State will not exceed ten (10) cubic yards.

8 9. The notification of any off-site shipments shall be in
9 writing, and shall include the following information, where
10 available: (1) the name and location of the facility to which the
11 hazardous substances are to be shipped; (2) the type and quantity
12 of the hazardous substances to be shipped; (3) the expected
13 schedule for the shipment of the hazardous substances; and (4)
14 the method of transportation. Respondent shall notify the
15 receiving state of major changes in the shipment plan, such as a
16 decision to ship the hazardous substances to another facility
17 within the same state, or to a facility in another state.

18 10. The identity of the receiving facility and state shall
19 be determined by Respondent following the award of the contract
20 for Remedial Action construction. Respondent shall provide all
21 relevant information on the off-Site shipments as soon as prac-
22 ticable after the award of the contract and before the hazardous
23 substances are actually shipped.

24 11. Within thirty (30) days after Respondent concludes that
25 the Work required by this Order has been fully performed, Respon-
26 dent shall so notify EPA and schedule and conduct an inspection

1 to be attended by Respondent and EPA. The inspection shall be
2 followed by a written report submitted by Respondent within
3 thirty (30) days of the inspection by a California-registered
4 professional engineer and Respondent's Project Coordinator
5 certifying that the Work has been completed in full satisfaction
6 of the requirements of this Order. If, after completion of the
7 inspection and receipt and review of the written report, EPA
8 determines that the Work or any portion thereof has not been
9 completed in accordance with this Order, EPA shall notify
10 Respondent in writing of the activities that must be undertaken
11 to complete the Work and shall set forth in the notice a schedule
12 for performance of such activities. Respondent shall perform all
13 activities described in the notice in accordance with the
14 specifications and schedules established therein. Nothing in
15 this Section shall limit EPA's right to perform periodic reviews
16 pursuant to Section 121(c) of CERCLA, 42 U.S.C. Section 9621(c),
17 or to take or require any action that in the judgment of EPA is
18 appropriate at the Site, in accordance with 42 U.S.C.
19 Sections 9604, 9606, or 9607.

20 12. Respondent shall, in accordance with the ROD and the
21 attached Statement of Work ("SOW") implement the Remedial Design
22 and Remedial Action Plans described below, including:

- 23 a) The design and implementation of a groundwater
24 monitoring program to determine if the formaldehyde
25 that has been released has migrated into the
26 groundwater and to establish the background level of

1 arsenic in groundwater, including the installation of
2 additional monitoring wells if formaldehyde is found
3 above the detection limit in the wells specified in the
4 SOW;

5 b) The design and implementation of a soil sampling
6 program to determine local background concentrations of
7 arsenic in soil and to enable EPA to set clean-up
8 standards for the Site; and

9 c) The use of institutional controls, including deed
10 restrictions and well permit restrictions, to prevent
11 exposure to potential soil and groundwater
12 contamination at the Site.

13
14 B. Identification of and Obligations Regarding Documents to be
15 Submitted to EPA ("Deliverables")

16 1. RD/RA Work Plan

17 a. Within thirty (30) days after Respondent selects an
18 approved contractor(s), Respondent shall submit a draft work plan
19 to EPA for the components of the Remedial Design and Remedial
20 Action at the Site, including those identified in the Statement
21 of Work ("SOW") attached as Appendix B to this Order. The RD/RA
22 Work Plan shall describe the tasks necessary to develop the
23 deliverables in accordance with the schedules set forth in the
24 SOW and in this Section. The RD/RA Work Plan shall be developed
25 in conformance with the ROD, EPA's "Superfund Remedial Design and
26 Remedial Action Guidance, OSWER Directive 9355.0-4A" and any

1 additional guidance documents provided by EPA.

2 b. Respondent shall implement the work detailed in the
3 RD/RA Work Plan as approved or modified by EPA. The fully
4 approved RD/RA Work Plan shall be deemed incorporated into and
5 made an enforceable part of this Order.

6 2. Progress Reports: The Respondent shall provide
7 bimonthly written progress reports to EPA. These progress
8 reports shall be submitted to EPA by the 10th of every other
9 month for work done during the preceding two-month period and
10 planned for the next two months, including sampling events. The
11 first bimonthly report pursuant to this Order will be due by the
12 tenth of the second calendar month immediately following the
13 effective date of this Order. The progress reports shall
14 include, but not be limited to:

15 a. A summary of technical and field work performed
16 since the previous report;

17 b. A discussion of significant findings and events;

18 c. A schedule of all Remedial Action activities
19 projected to be performed or completed during the next reporting
20 period. Respondent shall give EPA at least fourteen (14) days
21 notice of scheduled sampling activities;

22 d. Deliverables due during the next reporting period;
23 and

24 e. Key personnel changes.

25 3. Quarterly Monitoring Reports: During the first year of
26 Remedial Action, the results of the groundwater quality and water

1 level monitoring program shall be presented in quarterly reports.
2 The Respondent shall submit a Quarterly Monitoring Report to EPA
3 within sixty (60) days of completing each quarterly sampling
4 event. The Quarterly Report shall contain, but not be limited
5 to:

6 a. A summary of groundwater quality and water level
7 monitoring performed during the previous quarter;

8 b. A summary of water level changes in the shallow and
9 regional zone monitoring wells, including water level contour
10 maps for the shallow zone;

11 c. A summary of significant findings;

12 d. A tabular summary of all analytes detected at each
13 groundwater monitoring well; and

14 e. A summary of data validation activities performed
15 in accordance with the EPA approved Quality Assurance Project
16 Plan prepared in accordance with Section XV (Quality Assurance,
17 Sampling and Data Analysis) and results of data validation.

18 4. Semiannual Monitoring Reports: The results of the
19 groundwater quality and water level monitoring program shall be
20 presented in semiannual reports during the second and third years
21 of monitoring. Except as noted in Paragraph 5 below, the
22 Respondent shall submit a Semiannual Monitoring Report to EPA
23 within sixty (60) days of completing each six-month period. In
24 addition to the information described in Paragraphs B(3)(a)
25 through B(3)(e) above, the Semiannual Monitoring Report shall
26 contain, but not be limited to, a discussion of whether

1 additional monitoring wells are needed (based on the detection of
2 formaldehyde in existing wells) to define the areal extent of
3 contamination.

4 5. Groundwater Summary Report: The results of the
5 groundwater monitoring program conducted as part of Remedial
6 Action shall be documented in a summary report. The Respondent
7 shall submit a Groundwater Summary Report to EPA within sixty
8 (60) days of completing the last sampling event. The Summary
9 Report shall summarize the groundwater monitoring data for the
10 previous three (3) years. This Summary Report shall be combined
11 with the final Semiannual Monitoring Report and, in addition to
12 the elements required for the Semiannual Report, shall contain,
13 but not be limited to:

14 a. An introduction including purpose, scope and a
15 summary of activities;

16 b. A summary of hydrogeologic conditions, including
17 water level hydrographs for all monitoring wells; and

18 c. A summary of groundwater quality conditions and
19 evaluation of trends and of background levels of arsenic observed
20 during the Remedial Action based on analytical results of
21 groundwater samples collected and contaminant concentration
22 hydrographs.

23 6. Within thirty (30) days after Respondent selects an ap-
24 proved contractor, Respondent shall submit to EPA a Sampling and
25 Analysis Plan ("SAP") for groundwater and soils, in accordance
26 with EPA Region IX guidance regarding sampling and analysis plans

1 dated February 2, 1990, and consistent with Section X.B.11 (Data
2 Management Plan). Respondent shall submit all data results to
3 EPA. The SAP shall include, but not be limited to, the
4 following:

- 5 a. Background information;
- 6 b. Objectives of sampling effort;
- 7 c. Locations of sampling points;
- 8 d. Rationale for sampling locations, number of
9 samples, blanks and duplicates, and analytical parameters;
- 10 e. Drilling, well construction, development, and
11 testing procedures;
- 12 f. Monitoring schedule;
- 13 g. Plans for disposal of contaminated or potentially
14 contaminated materials generated during sampling;
- 15 h. Sample labeling, sealing, storage, shipment,
16 packing, and chain-of-custody; and
- 17 i. Analytical methods to be used for sample analysis.

18 7. Respondent shall, within thirty (30) days after receipt
19 of EPA approval of the RD/RA Work Plan, prepare and submit to EPA
20 for review, a Site Health and Safety Plan for field activities.
21 The Site Health and Safety Plan shall conform to the applicable
22 Occupational Safety and Health Administration and EPA
23 requirements, including but not limited to 54 Fed. Reg. 9294.

24 8. Quality Assurance Project Plan

25 a. Within thirty (30) days of receipt of EPA approval
26 of the RD/RA Work Plan, Respondent shall submit to EPA a Quality

1 Assurance Project Plan ("QAPjP") for Remedial Design and Remedial
2 Action activities. The QAPjP shall, where applicable, be
3 prepared in accordance with current EPA guidance as described in
4 Section XV (Quality Assurance, Sampling and Data Analysis). Upon
5 approval and notice by EPA to the Respondent, Respondent shall
6 implement the Plan. The Plan shall include, but not be limited
7 to:

- 8 1) Project organization and responsibility;
- 9 2) Data quality and quality assurance objectives;
- 10 3) Sampling procedures;
- 11 4) Sample control and custody procedures;
- 12 5) Analytical procedures;
- 13 7) Calibration procedures and frequency;
- 14 8) Analytical procedures;
- 15 9) Data reduction, validation and reporting;
- 16 10) Internal quality control checks and frequency;
- 17 11) Preventive maintenance procedures; and
- 18 12) Assessment of data quality.

19 9. Remedial Design: Respondent shall submit to EPA a
20 Remedial Design that contains the plans and specifications for
21 the remedy described in the ROD and in the attached SOW.

22 10. Data Management Plan: Within thirty (30) days of
23 receipt of EPA approval of the RD/RA Work Plan, Respondent shall
24 submit to EPA a Data Management Plan that describes the proposed
25 data collection program, data storage requirements and reporting
26 procedures for supplying performance information to EPA. The

1 plan shall include the format for providing the data and QA/QC
2 information to EPA.

3 11. Report on Arsenic Background Levels in Soil: Within
4 180 days of receipt of EPA approval of the Remedial Design,
5 Respondent shall submit to EPA a Report on Arsenic Background
6 Levels in Soil.

7 12. All technical reports and documents submitted by
8 Respondent shall be signed by a registered civil engineer
9 licensed by the State of California or a geologist registered in
10 the State of California who indicates responsibility for content.
11 Reports signed by civil engineers must be stamped with their seal
12 which notes the expiration date of the license, and geologists
13 must indicate their license number in conjunction with their
14 signature.

16 XI. EPA PERIODIC REVIEW

17 Under Section 121(c) of CERCLA, 42 U.S.C. Section 9621(c),
18 and any applicable regulations, EPA may review Site conditions to
19 assure that the Work performed pursuant to this Order adequately
20 protects human health and the environment. Until such time as
21 EPA certifies completion of the Work, Respondent shall conduct
22 the requisite response actions as determined necessary by EPA in
23 order to permit EPA to conduct the review under Section 121(c) of
24 CERCLA. As a result of any review performed under this Section,
25 Respondent may be required to perform additional Work or to
26 modify Work previously performed.

1
2 XII. ADDITIONAL RESPONSE ACTIONS

3 1. EPA may determine that in addition to the Work iden-
4 tified in this Order and attachments to this Order, additional
5 response activities may be necessary to protect human health and
6 the environment. If EPA determines that additional response
7 activities are necessary, EPA may require Respondent to submit a
8 work plan for additional response activities. EPA may also re-
9 quire Respondent to modify any plan, design, or other deliverable
10 required by this Order, including any approved modifications.

11 2. Not later than thirty (30) days after receiving EPA's
12 notice that additional response activities are required pursuant
13 to this Section, Respondent shall submit a work plan for the
14 response activities to EPA for review and approval. Upon ap-
15 proval by EPA, the work plan is incorporated into this Order as a
16 requirement of this Order and shall be an enforceable part of
17 this Order. Upon approval of the work plan by EPA, Respondent
18 shall implement the work plan according to the standards,
19 specifications, and schedule in the approved work plan. Respon-
20 dent shall notify EPA in writing of its intent to perform such
21 additional response activities within seven (7) days after
22 receipt of EPA's request for additional response activities.

23
24 XIII. ENDANGERMENT AND EMERGENCY RESPONSE

25 1. In the event of any action or occurrence during the
26 performance of the Work which causes or threatens to cause a

1 release of a hazardous substance or which may present an im-
2 mediate threat to public health or welfare or the environment,
3 Respondent shall immediately take appropriate action to prevent,
4 abate, or minimize the threat, and shall immediately notify EPA's
5 Remedial Project Manager (RPM) (See Section XVII). If the RPM is
6 not available Respondent shall notify the EPA Emergency Response
7 Unit, Region 9. Respondents shall take such action in consult-
8 ation with EPA's RPM and in accordance with all applicable provi-
9 sions of this Order, including but not limited to the Health and
10 Safety Plan required by Section X of this Order. In the event
11 that Respondent fails to take appropriate response action as
12 required by this Section, and EPA takes that action instead,
13 Respondent shall be liable to EPA for all costs of the response
14 action not inconsistent with the NCP.

15 2. Nothing in the preceding Paragraph shall be deemed to
16 limit any authority of the United States to take, direct, or or-
17 der all appropriate action to protect human health and the en-
18 vironment or to prevent, abate, or minimize an actual or
19 threatened release of hazardous substances on, at, or from the
20 Site.

21 22 XIV. EPA REVIEW OF SUBMISSIONS

23 1. After review of any deliverable, plan, report or other
24 item which is required to be submitted for review and approval
25 pursuant to this Order, EPA may: (a) approve the submission; (b)
26 approve the submission with modifications by EPA; (c) disapprove

1 the submission and direct Respondent to re-submit the document
2 after incorporating EPA's comments; or (d) disapprove the submis-
3 sion and assume responsibility for performing all or any part of
4 the response action. As used in this Order, the terms
5 "approval by EPA", "EPA approval", or a similar term means the
6 action described in (a) or (b) of this Paragraph.

7 2. In the event of approval or approval with modifications
8 by EPA, Respondent shall proceed to take any action required by
9 the plan, report, or other item, as approved or modified by EPA.

10 3. Upon receipt of a notice of disapproval and request for
11 a modification, Respondent shall, within fourteen (14) days or
12 such longer time as specified by EPA in its notice of disapproval
13 and request for modification, correct the deficiencies and resub-
14 mit the plan, report, or other item for approval. Notwithstand-
15 ing an approval with modifications by EPA, or a notice of disap-
16 proval, Respondent shall proceed, at the direction of EPA, to
17 take any action required by any non-deficient portion of the sub-
18 mission.

19 4. If any submission is not approved by EPA under
20 Paragraph 1 (a) or (b) of this Section, Respondent shall be
21 deemed to be in violation of this Order. An approval by EPA pur-
22 suant to Paragraph 3 of this Section of an initially disapproved
23 submission shall cure Respondent's violation.

24 5. Notwithstanding any approvals which may be granted by
25 EPA, no warranty of any kind is provided by EPA with regard to
26 the Work.

1 6. Any reports, plans, specifications, schedules, appen-
2 dices, and attachments required or established by this Order are,
3 upon approval by EPA, incorporated into this Order.
4

5 XV. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

6 1. Respondent shall use the quality assurance, quality
7 control, and chain of custody procedures described in the "EPA
8 NEIC Policies and Procedures Manual," May 1978, revised May 1986,
9 EPA-330/9-78-001-R; the "National Enforcement Investigations Cen-
10 ter Manual for the Evidence Audit", published in September 1981;
11 EPA's "Guidelines and Specifications for Preparing Quality As-
12 surance Program Documentation," June 1, 1987; EPA's "Data Quality
13 Objective Guidance," (EPA/540/G87/003 and 004); and any amend-
14 ments to these documents, while conducting all sample collection
15 and analysis activities required herein by any plan. To provide
16 quality assurance and maintain quality control, Respondent shall:

17 a. Use only laboratories which have a documented Quality
18 Assurance Program that complies with EPA guidance document QAMS-
19 005/80.

20 b. Ensure that the laboratory used by the Respondent for
21 analyses performs according to a method or methods deemed satis-
22 factory to EPA and submits all protocols to be used for analyses
23 to EPA at least thirty (30) days before beginning analysis.

24 c. Ensure that EPA personnel and EPA's authorized represen-
25 tatives are allowed access to the laboratory and personnel used
26 by the Respondent for analyses.

1 2. Respondent shall notify EPA not less than fourteen (14)
2 days in advance of any sample collection activity. At the re-
3 quest of EPA, Respondent shall allow split or duplicate samples
4 to be taken by EPA or its authorized representatives, of any
5 samples collected by Respondent with regard to the Site or pur-
6 suant to the implementation of this Order. In addition, EPA
7 shall have the right to take any additional samples that EPA
8 deems necessary.

9
10 XVI. COMPLIANCE WITH APPLICABLE LAWS

11 1. All Work performed by Respondent pursuant to this Order
12 shall comply with all applicable or relevant and appropriate re-
13 quirements (ARARs) identified in the ROD. Within forty-five (45)
14 days of the effective date of this Order, Respondent shall submit
15 to EPA a plan detailing how Respondent intends to comply with
16 each ARAR identified in the ROD.

17 2. All activities by Respondent pursuant to this Order shall
18 also be performed in accordance with the requirements of all
19 applicable federal, state, and local laws, regulations, and
20 permitting requirements; provided, that, as set forth in Section
21 121(e) of CERCLA and the NCP, no permit shall be required for any
22 portion of the Work conducted entirely on-Site. Where any por-
23 tion of the Work requires a federal or state permit or approval,
24 Respondent shall submit timely applications and take all other
25 actions necessary to obtain and to comply with all such permits
26 or approvals.

1 3. This Order is not, and shall not be construed to be, a
2 permit issued pursuant to any federal or state statute or regula-
3 tion.

4 4. EPA has determined that the response actions required by
5 this Order, if performed in accordance with this Order, are con-
6 sistent with the National Contingency Plan ("NCP").

7 5. Nothing in this Order shall be deemed to constitute a
8 preauthorization of a CERCLA claim within the meaning of Sections
9 111 or 112 of CERCLA, 42 U.S.C. Section 9611 or 9612, or 40
10 C.F.R. Section 300.25(d).

11
12 XVII. REMEDIAL PROJECT MANAGER

13 1. All communications, whether written or oral, from Respon-
14 dent to EPA shall be directed to EPA's Remedial Project Manager
15 ("RPM"). Respondent shall submit to EPA three copies of all
16 documents, including plans, reports, and other correspondence,
17 which are developed pursuant to this Order, and shall send these
18 documents by certified mail, return receipt requested.
19 Respondent shall also simultaneously send a copy of each document
20 to DHS and to RWQCB. Documents submitted to EPA's Remedial
21 Project Manager shall be sent to:

22 Frederick K. Schauffler
23 Hazardous Waste Management Division
24 75 Hawthorne Street (H-7-2)
25 San Francisco, CA 94105
26 Phone number: (415) 744-2365.

27 2. EPA's Assistant Regional Counsel is: Dan Reich, Office
28 of Regional Counsel, 75 Hawthorne St., San Francisco, CA 94105,

1 phone number (415) 744-1336. EPA may change its Remedial Project
2 Manager or Assistant Regional Counsel. Such a change shall be
3 accomplished by notifying the Respondent in writing at least one
4 week prior to the change except in the case of an emergency, in
5 which case notification shall be made orally followed by written
6 notification as soon as possible.

7 3. EPA's RPM shall have the authority lawfully vested in a
8 Remedial Project Manager (RPM) and On-Scene Coordinator ("OSC")
9 by the National Contingency Plan, 40 C.F.R. Part 300. EPA's RPM
10 shall have authority, consistent with the National Contingency
11 Plan, to halt any work required by this Order, and to take any
12 necessary response action.

13 4. Within ten (10) days after the effective date of this
14 Order, Respondent shall designate a Project Coordinator to rep-
15 resent it regarding the Work addressed in this Order, and shall
16 submit the name, address, and telephone number of the Project
17 Coordinator to EPA for review and approval. Respondent's Project
18 Coordinator shall be responsible for overseeing Respondent's im-
19 plementation of this Order and for coordination of communication
20 between EPA and Respondent. If Respondent wishes to change its
21 Project Coordinator, Respondent shall provide written notice to
22 EPA, five (5) days prior to changing the Project Coordinator, of
23 the name and qualifications of the new Project Coordinator.

24 XVIII. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

25 1. Respondent shall allow EPA and its authorized represen-

1 tatives and contractors to enter and freely move about the Site
2 and off-Site areas subject to or affected by the Work under this
3 Order or where documents required to be prepared or maintained by
4 this Order are located as deemed necessary by EPA, including such
5 access for the purposes of inspecting conditions, activities, the
6 results of activities, records, operating logs, and contracts re-
7 lated to the Site or Respondent and its representatives or
8 contractors pursuant to this Order; reviewing the progress of the
9 Respondent in carrying out the terms of this Order; conducting
10 tests as EPA or its authorized representatives or contractors
11 deem necessary; using a camera, sound recording device or other
12 documentary type equipment; and verifying the data submitted to
13 EPA by Respondent. Respondent shall allow EPA and its authorized
14 representatives to enter the Site, to inspect and copy all
15 records, files, photographs, documents, sampling and monitoring
16 data, and other writings related to work undertaken in carrying
17 out this Order. Nothing herein shall be interpreted as limiting
18 or affecting EPA's right of entry or inspection authority under
19 Federal law.

20 2. Under the provisions of Section 104(e) of CERCLA, 42
21 U.S.C. Section 9604(e), EPA explicitly reserves the right to ob-
22 serve the Work of Respondent as it is performed. In addition,
23 EPA and its authorized representatives reserve the right, at its
24 request, to take splits of any samples obtained by Respondent or
25 anyone acting on Respondent's behalf in the implementation of the
26 Work.

1 3. During the design and implementation of remedial ac-
2 tivities, Respondent shall notify EPA fourteen (14) days prior to
3 any sampling conducted by Respondent or anyone acting on
4 Respondent's behalf. Respondent shall notify EPA fourteen (14)
5 days prior to the disposal of any such sample, and EPA shall have
6 an opportunity to take possession of all or a portion of such
7 sample.

8 4. Respondent may assert a claim of business confiden-
9 tiality covering part or all of the information submitted to EPA
10 pursuant to the terms of this Order under 40 C.F.R. section 2.203
11 only if such claim is not inconsistent with Section 104(e)(7) of
12 CERCLA, 42 U.S.C. section 9604(e)(7), or other provisions of law.
13 Any such claim shall be asserted in the manner described by 40
14 C.F.R. section 2.203(b) and substantiated by Respondent at the
15 time the claim is made. Information determined by EPA to be con-
16 fidential will be given the protection specified in 40 C.F.R.
17 Part 2. If no such claim accompanies the information when it is
18 submitted to EPA, it may be made available to the public by EPA
19 or the state without further notice to the Respondent. Respon-
20 dent shall not assert confidentiality claims with respect to any
21 sampling or analytical data or reports generated under this Order
22 or for documents that fall under Section 104(e)(7)(F) of CERCLA,
23 42 U.S.C. Section 9604(e)(7)(F).

24 5. Respondent shall maintain an index of documents that
25 Respondent claims contain confidential business information for
26 the period during which this Order is in effect. The index shall

1 contain, for each document, the date, author, addressee, and sub-
2 ject of the document. Upon written request from EPA, Respondent
3 shall submit a copy of the index to EPA.

4 6. For the purposes of Section XV (Quality Assurance,
5 Sampling and Data Analysis) and this Section, EPA's authorized
6 representatives shall include, but not be limited to, the
7 California Department of Health Services, the Regional Water
8 Quality Control Board for the Central Valley Region, and
9 consultants and contractors hired by EPA to oversee activities
10 required by this Order.

12 XIX. RECORD PRESERVATION

13 1. Respondent shall provide to EPA, upon request, copies
14 of any and all documents and information within its possession or
15 control or in possession or control of its divisions, employees,
16 agents, accountants, contractors, or attorneys (other than docu-
17 ments or information privileged under the attorney-client or work
18 product privileges) relating to activities at the Site or to the
19 implementation of this Order, including but not limited to sam-
20 pling, analysis, chain of custody records, manifests, trucking
21 logs, receipts, reports, sample traffic routing, correspondence,
22 or other documents or information related to the Work. Respon-
23 dent shall also make available to EPA for purposes of investiga-
24 tion, information gathering, or testimony, its employees, agents,
25 or representatives with knowledge of relevant facts concerning
26 the performance of the Work.

1 2. For a period of ten (10) years following Respondent's
2 completion of the Work pursuant to this Order, Respondent shall
3 preserve and retain all records and documents in its possession
4 or control or in the possession or control of its divisions,
5 employees, agents, accountants, contractors or attorneys, that
6 relate in any manner to the Work, environmental conditions at the
7 Site, the causes of the environmental conditions at the Site,
8 Respondent's liability for those environmental conditions,
9 Respondent's use or disposal of hazardous substances at the Site,
10 or the implementation of this Order. At the conclusion of this
11 document retention period, Respondent shall notify EPA at least
12 ninety (90) days prior to the destruction of any such records or
13 documents, and upon request by EPA, Respondent shall deliver any
14 such records or documents to EPA.

15 3. Until ten (10) years after Respondent's completion of
16 the Work pursuant to this Order, Respondent shall preserve, and
17 shall instruct their contractors and agents to preserve, all
18 documents, records, and information of whatever kind, nature or
19 description relating to the performance of the Work. Upon the
20 conclusion of this document retention period, Respondent shall
21 notify EPA at least ninety (90) days prior to the destruction of
22 any such records, documents or information, and, upon request of
23 EPA, Respondent shall deliver all such documents, records and
24 information to EPA.

25 4. Within thirty (30) days after the effective date of
26 this Order, Respondent shall submit a written certification to

1 EPA's RPM stating whether or not Respondent has altered, muti-
2 lated, discarded, disposed of, or destroyed, since notification
3 of potential liability by the United States or the State, any
4 records, documents or other information relating to: 1) its
5 potential liability under CERCLA, 2) and its use of or disposal
6 of hazardous substances with regard to the Site. Respondent
7 shall not dispose of any such documents after the effective date
8 of this Order without prior approval by EPA. Respondent shall,
9 upon EPA's request and at no cost to EPA, deliver the documents
10 or copies of the documents to EPA.

11
12 XX. DELAY IN PERFORMANCE

13 1. Any delay in performance of this Order that, in EPA's
14 judgment, is not properly justified by Respondent under the terms
15 of this Paragraph shall be considered a violation of this Order.
16 Any delay in performance of this Order shall not affect
17 Respondent's obligations to fully comply with all terms and con-
18 ditions of this Order.

19 2. Respondent shall notify EPA of any delay or anticipated
20 delay in performing any requirement of this Order. Such
21 notification shall be made by telephone to EPA's RPM within
22 twenty-four (24) hours after Respondent first knew or should have
23 known that a delay might occur. Respondent shall adopt all
24 reasonable measures to avoid or minimize any such delay. Within
25 two (2) business days after notifying EPA by telephone, Respon-
26 dent shall provide written notification fully describing the na-

1 ture of the delay, any asserted justification for delay, any
2 reason why Respondent should not be held strictly accountable for
3 failing to comply with any relevant requirements of this Order,
4 the measures planned and taken to minimize the delay, and a
5 schedule for implementing the measures that will be taken to
6 mitigate the effect of the delay. Increased costs or expenses
7 associated with implementation of the activities called for in
8 this Order are not a justification for any delay in performance.

9
10 XXI. ASSURANCE OF ABILITY TO COMPLETE WORK

11 1. Respondent shall demonstrate its ability to complete
12 the Work required by this Order and to pay all claims that arise
13 from the performance of the Work by obtaining and presenting to
14 EPA within thirty (30) days after the effective date of this Or-
15 der, one of the following: (1) a performance bond; (2) a letter
16 of credit; (3) a guarantee by a third party; or (4) internal
17 financial information which is sufficient to allow EPA to deter-
18 mine that Respondent have sufficient assets available to perform
19 the Work. Respondent shall demonstrate financial assurance in an
20 amount no less than the estimate of cost for the remedial design
21 and remedial action contained in the Record of Decision for the
22 Site. If Respondent seeks to demonstrate ability to complete the
23 remedial action by means of internal financial information, or by
24 guarantee of a third party, it shall re-submit such information
25 annually, on the anniversary of the effective date of this Order.
26 If EPA determines that such financial information is inadequate,

1 Respondent shall, within thirty (30) days after receipt of EPA's
2 notice of determination, obtain and present to EPA for approval
3 one of the other three forms of financial assurance listed above.

4 2. At least seven (7) days prior to commencing any work at
5 the Site pursuant to this Order, Respondent shall submit to EPA a
6 certification that Respondent or its contractors and sub-
7 contractors have adequate insurance coverage or have indemnifica-
8 tion for liabilities for injuries or damages to persons or
9 property which may result from the activities to be conducted by
10 or on behalf of Respondents pursuant to this Order. Respondent
11 shall ensure that such insurance or indemnification is maintained
12 for the duration of the Work required by this Order.

13 14 XXII. UNITED STATES NOT LIABLE

15 The United States, by issuance of this Order, assumes no
16 liability for any injuries or damages to persons or property
17 resulting entirely or partially from acts or omissions by Respon-
18 dent, or its directors, officers, employees, agents, represen-
19 tatives, successors, assigns, contractors, or consultants in car-
20 rying out any action or activity pursuant to this Order. Neither
21 EPA nor the United States may be deemed to be a party to any con-
22 tract entered into by Respondent or its directors, officers,
23 employees, agents, successors, assigns, contractors, or consult-
24 ants in carrying out any action or activity pursuant to this Or-
25 der. Respondent, its directors, officers, employees, agents,
26 successors, assigns, contractors, and consultants shall not be

1 considered agents of the United States.

2
3 XXIII. ENFORCEMENT AND RESERVATIONS

4 1. EPA reserves the right to bring an action against
5 Respondent under Section 107 of CERCLA, 42 U.S.C. Section 9607,
6 for recovery of any response costs incurred by the United States
7 related to the releases or threatened releases at or from the
8 Site or related to this Order and not reimbursed by Respondent.
9 This reservation shall include but not be limited to past costs,
10 direct costs, indirect costs, the costs of any response actions
11 EPA takes under this Order, the costs of oversight, the costs of
12 compiling the cost documentation to support oversight cost
13 demand, as well as accrued interest as provided in Section 107(a)
14 of CERCLA. In addition, EPA reserves the right to bring an ac-
15 tion against Respondent for civil penalties under Section 106(b)
16 of CERCLA, 42 U.S.C. Section 9606(b), and for treble damages un-
17 der Section 107(c)(3) of CERCLA, 42 U.S.C. Section 9607(c)(3).

18 2. Notwithstanding any other provision of this Order, at
19 any time during the response action, EPA may perform its own
20 studies, complete the response action (or any portion of the
21 response action) as provided in CERCLA and the NCP, and seek
22 reimbursement from Respondent for its costs, or seek any other
23 appropriate relief.

24 3. Nothing in this Order shall preclude EPA from taking
25 any additional enforcement actions, including modification of
26 this Order or issuance of additional Orders, and/or additional

1 remedial or removal actions as EPA may deem necessary, or from
2 requiring Respondent in the future to perform additional ac-
3 tivities pursuant to CERCLA, 42 U.S.C. Section 9606(a), et seq.,
4 or any other applicable law. Respondent shall be liable as
5 provided in CERCLA Section 107(a), 42 U.S.C. Section 9607(a), for
6 the costs of any such additional actions.

7 4. Notwithstanding any provision of this Order, the United
8 States retains all of its information gathering, inspection and
9 enforcement authorities and rights under CERCLA, RCRA and any
10 other applicable statutes or regulations.

11 12 XXIV. CIVIL PENALTIES

13 1. Respondent shall be subject to civil penalties under
14 Section 106(b) of CERCLA, 42 U.S.C. Section 9606(b), of not more
15 than \$25,000 for each day in which Respondent willfully violates,
16 or fails or refuses to comply with this Order without sufficient
17 cause. In addition, failure to properly provide response action
18 under this Order, or any portion hereof, without sufficient
19 cause, may result in liability under Section 107(c)(3) of CERCLA,
20 42 U.S.C. Section 9607(c)(3), for punitive damages in an amount
21 at least equal to, and not more than three times, the amount of
22 any costs incurred by the Fund as a result of such failure to
23 take proper action.

24 2. Nothing in this Order shall constitute or be construed
25 as a release from any claim, cause of action or demand in law or
26 equity against any person for any liability it may have arising

1 out of or relating in any way to the Site.

2 3. If a court issues an order that invalidates any provi-
3 sion of this Order or finds that Respondent has sufficient cause
4 not to comply with one or more provisions of this Order,
5 Respondent shall remain bound to comply with all provisions of
6 this Order not invalidated by the court's order.

7
8 XXV. ADMINISTRATIVE RECORD

9 Upon request by EPA, Respondent must submit to EPA all
10 documents related to the selection of the response action for
11 possible inclusion in the administrative record file.

12
13 XXVI. EFFECTIVE DATE AND COMPUTATION OF TIME

14 This Order shall be effective thirty (30) days after
15 signature by the Director, Hazardous Waste Management Division.
16 Unless otherwise specified in this Order, all times for
17 performance of ordered activities shall be calculated from this
18 effective date.

19
20 XXVII. SECTION HEADINGS

21 The section headings set forth in this Order and its Table
22 of Contents are included for convenience of reference only and
23 shall be disregarded in the construction and interpretation of
24 any of the provisions of this Order.

1 XXVIII. OPPORTUNITY TO CONFER

2 A. Respondent may, within ten (10) days after signature of
3 this Order by the Director, Hazardous Waste Management Division,
4 request a conference with EPA's Assistant Regional Counsel to
5 discuss this Order. If requested, the conference shall occur no
6 later than ten (10) days after the date of the request at EPA's
7 Regional office, 75 Hawthorne Street, San Francisco, California.

8 B. The purpose and scope of the conference shall be limited
9 to issues involving the implementation of the response actions
10 required by this Order and the extent to which Respondent intends
11 to comply with this Order. This conference is not an evidentiary
12 hearing, and does not constitute a proceeding to challenge this
13 Order. It does not give Respondent a right to seek review of
14 this Order, or to seek resolution of potential liability, and no
15 official stenographic record of the conference will be made. At
16 any conference held pursuant to Respondent's request, Respondent
17 may appear in person or by an attorney or other representative.
18 Requests for a conference must be by telephone followed by
19 written confirmation mailed that day to EPA's Assistant Regional
20 Counsel.

21
22 XXIX. STATE AND LOCAL AGENCY PARTICIPATION


23 Respondent shall make available, upon request of EPA's
24 Remedial Project Manager, copies of any deliverable required by
25 this Order to the State of California for review. Documents
26 submitted to DHS and RWQCB shall be sent to:

1 Ed Cargile
2 Toxic Substances Control Program
3 Dept. of Health Services
4 10151 Croydon Way
5 Sacramento, CA 95827
6

7 Philip Woodward
8 Regional Water Quality Control Board, Central Valley Region
9 415 Knollcrest Drive
10 Redding, CA 96002
11
12

13 After the agencies have had the chance to review the
14 deliverables, EPA may meet with the agencies to discuss the
15 deliverables and prepare collaborative comments. Any
16 collaborative comments prepared by or on behalf of EPA shall be
17 submitted to Respondent as EPA's comments. Respondent shall
18 respond to all of these comments as may be required by the terms
19 of Section X (Work to be Performed).
20

21 So Ordered, this 30th day of July, 1991.
22

23 BY: 
24 Jeffrey Zelikson
25 Director, Hazardous Waste Management Division
26 U.S. Environmental Protection Agency
27 Region 9

1
2 **Appendix B**
3 **STATEMENT OF WORK**
4 **for the**
5 **REMEDIAL DESIGN and REMEDIAL ACTION**
6 **at the**
7 **LOUISIANA-PACIFIC SITE**
8 **Oroville, California**

9 **I. Purpose**

10 The purpose of this Statement of Work (SOW) at the
11 Louisiana-Pacific Site is to fully implement the Record of Deci-
12 sion for the Site which was signed by the Regional Administrator
13 on September 28, 1990. The U.S. EPA Superfund Remedial Design
14 and Remedial Action Guidance, the Interim Record of Decision, the
15 approved Remedial Design/Remedial Action (RD/RA) Work Plan, any
16 additional guidance provided by EPA and this SOW shall be fol-
17 lowed in designing, implementing and submitting deliverables for
18 the Remedial Action at the Louisiana-Pacific (L-P) Site.

19
20 **II. Description of the Remedial Action**

21 The major components of the remedial action for the L-P site
22 which shall be designed and implemented by the Respondent are:

23 **1. Site Access Restrictions**

24 The Respondent shall provide site access restrictions
25 to prevent access to the site by trespassers.
26

1 **2. Institutional Controls**

2 The Respondent shall place a deed restriction against
3 future residential use of the L-P plant property as an
4 interim measure until such time as EPA determines that
5 the property is clean enough to remove that restric-
6 tion. The deed restriction shall be in place within 3
7 months of the effective date of the Order.

8 The Respondent shall also (1) prohibit the drilling of
9 shallow aquifer drinking water wells at the L-P plant,
10 (2) provide proper seals on deep wells drilled through
11 the shallow aquifer at the L-P plant, and (3) prohibit
12 drilling of deep drinking water supply wells at the L-P
13 landfill. To address the need for interim well permit
14 restrictions off-Site, the Respondent shall provide
15 such support as is necessary to enable the local
16 permitting authorities to (1) prohibit the drilling of
17 shallow aquifer wells near the L-P plant and (2)
18 provide proper seals on deep wells drilled through the
19 shallow aquifer near the L-P plant.

20 **3. Groundwater Monitoring**

21 The Respondent shall implement a groundwater monitoring
22 program as identified in the Remedial Design or as re-
23 quired by EPA. The groundwater monitoring program
24 shall be designed to detect changes/increases in the
25
26

chemical concentration of contaminants in shallow groundwater beneath the plant and regional groundwater beneath the landfill. Groundwater monitoring shall include collection and field/laboratory analysis of samples from monitoring wells at the plant and at the landfill. Each monitoring well shall be sampled quarterly for the first year and semiannually thereafter. Semiannual samples shall be taken in February and August. Monitoring wells shall be sampled for at least three years. At the end of 3 years, EPA shall determine the need for additional monitoring. Field analysis and measurements to be performed shall include specific conductance, pH and water level elevation. Laboratory analyses to be performed shall include at a minimum formaldehyde, arsenic, and total dissolved solids. If additional information indicates that the groundwater monitoring program is inadequate, EPA may require the design and construction of additional groundwater monitoring wells and additional laboratory analysis of additional parameters. Monitoring wells designated for sampling are noted below:

<u>Well No.</u> ¹	<u>Frequency</u>	<u>Aquifer</u>
ML-1	Quarterly	Shallow
ML-2	Quarterly	Regional

1	<u>Well No.</u>	<u>Frequency</u>	<u>Aquifer</u>
2	ML-3	Quarterly	Shallow
3	ML-5	Quarterly	Shallow
4	W-4	Quarterly	Shallow
5	W-5	Quarterly	Regional
6	W-8	Quarterly	Shallow
7	W-2	Quarterly	Regional
8	W-3	Quarterly	Regional
9	LF-1	Quarterly	Regional
10	LF-2	Quarterly	Regional
11	LF-3	Quarterly	Regional
12	LF-4	Quarterly	Regional
13	LF-5	Quarterly	Regional

14

15 ¹Well numbers correspond to those used
 16 in the Feasibility Study (see figure 1)

17

18 The Respondent shall, at EPA's direction, replace any
 19 monitoring well noted above that has been damaged,
 20 destroyed or otherwise become unusable since completion
 21 of the RI/FS.

22

23 **4. Determination of Arsenic Background Levels in Soil**

24 The Respondent shall design and implement an investiga-
 25 tion of background levels of arsenic in local soils.
 26 This study shall include off-Site soil sampling to ob-

tain data on arsenic levels in uncontaminated soil.
For the purpose of further defining the extent of soil contamination, Respondent shall also collect and analyze additional soil samples from areas of the log deck where water from the log deck pond is or has been applied via sprinklers.

III. Scope of Remedial Design and Remedial Action

The Remedial Design/Remedial Action shall consist of four tasks:

Task I: Remedial Design/Remedial Action Work Plan

Task II: Remedial Design

Task III: Remedial Action (Sampling and Monitoring)

Task IV: Reports and Submissions

Task I: Remedial Design/Remedial Action Work Plan

The Respondent shall submit a Work Plan which shall document the overall management strategy for performing the design and implementation of Remedial Actions for EPA review and approval.

The plan shall document the responsibility and authority of all organizations and key personnel involved with the implementation.

The Work Plan shall also include a description of qualifications of key personnel directing the Remedial Design, including contractor personnel. The Respondent shall submit a draft RD/RA Work Plan according to the schedule identified in the Submission summary below. The Respondent shall submit a final RD/RA Work

1 Plan incorporating EPA's comments on the draft Work Plan
2 according to the schedule in the Submission summary.

3
4 **Task II: Remedial Design**

5 The Respondent shall prepare final plans and specifications
6 to implement the Remedial Actions at the Site as defined in the
7 "Purpose" and the "Description of the Remedial Action" of this
8 SOW.

9 The Respondent shall develop clear and comprehensive design
10 plans and specifications which include but are not limited to the
11 following:

- 12 1. Discussion of the design strategy and the design basis,
13 including:
 - 14 a. Compliance with all applicable or relevant and ap-
15 propriate requirements, and
 - 16 b. Minimization of environmental and public impacts;
- 17 2. Description of assumptions made and detailed justifica-
18 tion of these assumptions; and
- 19 3. Discussion of the possible sources of error and
20 references to possible sampling problems.

21
22 **A. Design Phases**

23 The Respondent shall meet regularly with EPA and the State
24 to discuss design issues. The design of the Remedial Action
25 shall include the phases outlined below:
26

1 1. Preliminary design

2 The Respondent shall submit the Preliminary design ac-
3 cording to the schedule in the Submission summary. The
4 submission shall be at 90% completion of design. After
5 approval of the preliminary submission, the Respondent
6 shall execute the required revisions and submit the
7 final design (100% completion).

8 The Preliminary Design submittal shall include the
9 Design Plans and Specifications (including the Remedial
10 Action Sampling and Analysis Plan, the Quality
11 Assurance Project Plan, and the Data Management Plan),
12 the Capital and Operating and Maintenance Cost
13 Estimate, Project Schedule, and the Health and Safety
14 Plan.

15
16 2. Final design

17 The Respondent shall submit a Final Design according to
18 the schedule in the Submission summary. The Final
19 Design submittal includes the Final Design Plans and
20 Specifications (100% complete), Final Cost Estimate,
21 Final Project Schedule, and the Final Health and Safety
22 Plan.

23
24 **Task III: Remedial Action (Sampling and Monitoring)**

25 The Respondent shall perform the soil sampling and
26 groundwater monitoring specified in the EPA-approved Remedial

Design/Remedial Action Work Plan and Remedial Design. The Respondent shall conduct a pre-implementation meeting to:

- a. Review methods for distributing analytical data;
- b. Review work area security and safety protocol; and
- c. Conduct a site walk-around to verify that the design plans and specifications are understood.

Task IV: Reports and Submissions

The Respondent shall prepare plans, specifications and reports as set forth in Tasks I, II and III to document the design and implementation of the Remedial Action. A summary of the information reporting requirements contained in the SOW is presented below:

<u>Submission</u>	<u>Due Date</u>
Draft RD/RA Work Plan	30 days after EPA approval of the contractor
Final RD/RA Work Plan	21 days after the receipt of EPA comments
Progress Reports	Bi-Monthly on the tenth day of every other month

<u>Submission</u>	<u>Due Date</u>
Preliminary Remedial Design	30 days after EPA approval of Final RD/RA Work Plan
Final Remedial Design	21 days after EPA approval of the Preliminary Design
Report on Arsenic Background Levels	180 days after EPA approval of the RD/RA Work Plan
Groundwater Monitoring Reports	Quarterly (1st year) Semiannually (2nd & 3rd years)
Groundwater Summary Report	Within 60 days after completion of the 3-year monitoring period